

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A method for multiple object recognition on an image pixel plane of received images, said method comprising:

(a) roughly classifying all pixel points of said received images according to whether or not a pixel point is relevant for said multiple object recognition, according to a set of first criterion related to a nonhomogeneous vicinity around each particular pixel point, to eliminate irrelevant pixel points from the relevant pixel points;

(b) forming a reduced image based on said relevant pixel points as roughly classified in step (a);

(c) filtering each reduced image for forming at least two filtered images whereby image components relevant for said multiple object recognition are retained in said at least two filtered images;

(d) further classifying each pixel point of said at least two filtered images for providing classified images, wherein said further classifying is performed by a group of different classifiers which operate in accordance with learned rules to allocate, with evaluation number, said classified images to different object classes, wherein each classifier of said group of different classifiers operates based on a characterizing vector of a respective filtered image forming a direct input information for is its respective classifier and wherein each different classifier works independently of any other classifier of said group of different classifiers;

(e) merging, for each pixel point, said classified images in accordance with an algorithm based on the evaluation numbers to perform a combined global evaluation for each class of said different object classes for providing merged images; and

(f) deciding for each pixel point, on the basis of said merged images, whether a pixel point of all remaining pixel points is still relevant and if so to which of said different object classes each relevant pixel point belongs.

2. (Previously presented) The method of claim 1, further comprising providing a set of second criteria for performing said filtering step (c).

3. (Original) The method of claim 1, further comprising acquiring vicinity image data representing a vicinity of a respective relevant pixel point of a corresponding filtered image, and forming said characterizing vector from said vicinity image data.

4. (Currently amended) The method of claim 1, wherein the allocation with evaluation number of said classified images to different object classes comprises allocating certain evaluation numbers of said different weighting factors to each relevant pixel point thereby marking each relevant pixel point with regard to which of said different classes of objects the marked pixel point belongs.

5. (Original) The method of claim 3, wherein said step of acquiring said vicinity image data comprises sorting said vicinity image data in a spiral pattern into a vector of coefficients, applying a rapid Fourier transformation to said vector of coefficients to form transformation coefficients and forming said characterizing vectors of an absolute value of said transformation coefficients.

6. (Previously presented) The method of claim 1, further comprising using, as said group of different classifiers, a neural network capable of learning for performing

said step of further classifying.

7. (Currently amended) The method of claim 6, further comprising selecting from relevant pixel points of said filtered images characterizing or feature vectors representing features of said relevant pixel points of said rough classifying, and forming rules for said neural network from said characterizing or feature vectors.

8. (Previously presented) The method of claim 1, further comprising performing said merging step in accordance with a statistical process for obtaining said global evaluation, and further comprising using in said statistical process information based at least on one of a type, position and content of said received images to be evaluated.

9. (Previously presented) The method of claim 1, further comprising representing recognized objects by pixel clusters in an image that represents a decision regarding said combined global evaluation while performing said deciding step.